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AZ CORP COMMISSION

# TUCSON SOLAR ALLIANCE

*fostering community and choice for Tucson's energy future*

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The Honorable Renz Jennings  
Arizona Corporation Commission

JUL 24 1998

Dear Commissioner Jennings:

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We appreciated the opportunity to address the Commission at its hearing last Thursday. Thank you for coming to Tucson. Although the time was limited, the attention that you and Commissioner Irvin gave to the remarks of those speaking made a very positive impression here. This was reflected in the newspaper article the following morning (attached).

As requested, we attach our suggestions, primarily focused on the Solar Portfolio Standard. They are the results of a two stage process in which the Tucson Solar Alliance widely circulated the portions of the draft Rules relating to solar energy and accumulated comments and discussion.

We applaud the initiative of the Commission in creating the Solar Portfolio Standard. This may well become one of the most significant legacies of the restructuring of the electric industry in Arizona. While weak in other energy resources, Arizona is recognized as having one of the greatest solar resources in the nation: solar equipment works here like nowhere else. An area a fraction of the size of our smallest county can supply solar power equal to the current electric consumption of the entire country. Solar energy has enormous potential for Arizona's economy.

Arizona now has a unique opportunity to become a leader in the emerging solar energy industry: the Commission's Solar Portfolio Standard is an important part of that. We are among the top three states on the U.S. Department of Energy's list for solar market potential. Big investments in solar generating facilities and manufacturing plants by large corporations like Boeing/McDonald Douglas and Allied Signal hinge on the Commission's decision.

People recognize that many of the costs of electric power are not included in their bills. The societal costs of these economic "externalities" are mounting. For two decades, polls have consistently shown that a increasing majority of Arizonans are very concerned about this and are willing to pay substantial premiums to obtain their electricity from solar energy.

This well of enthusiasm and support for solar energy was demonstrated at the hearing. The Commission is rightly acting on behalf of the public good in establishing a strong and effective Solar Portfolio Standard. Thank you very much for your good work.

Sincerely yours,  
Paul Huddy

## Tucsonans keen on competitive electricity plans

By Alan D. Fischer  
The Arizona Daily Star  
Friday, 17 July 1998

Tucsonans proved last night they really do care about how they buy their electricity.

More than 120 people formed a sweaty, aisle-packing, standing-room-only crowd at a hearing and information session on the Arizona Corporation Commission's efforts to open electricity sales to competition next year.

The turnout dwarfed the attendance at a similar meeting in Phoenix the night before.

About 30 of those attending addressed ACC members Jim Irvin and Renz Jennings, who were gathering the public's opinions for a revised draft of the commission's competition order due out late next week.

The order will be considered for approval Aug. 5, Irvin said.

Competition is scheduled to begin Jan. 1, with large commercial and industrial users accommodated first.

Small businesses and residential customers will be phased in slowly, and everyone will have access to competitive generation by Jan. 1, 2001.

Several speakers voiced strong support for the proposed order's focus on solar power.

The proposal's "solar portfolio" calls for 0.5 percent of retail electricity sold competitively in 1999 to be solar-generated, with that figure jumping to 1 percent by 2002.

"You should be doing much more for solar," said Helen Bayly of Tucson to the cheers of many in the crowd. "You could jack (the required percentage) up a bit."

Jennings said that because solar generation is currently much more expensive than other forms, too high a requirement would be prohibitive for suppliers.

"I'm a solar booster, but 40 cents a kilowatt-hour (for solar) is a lot more than 5 to 8 cents," the cost of conventional generation, Jennings

said.

Helmut Frank told the commissioners: "This is our first chance to give solar a push that will put Arizona on the map as the leading solar state in the nation."

Vivian Swearingen said, "It's important to keep the solar portfolio. Arizona has more sunlight than any other state in the nation, and we should use it."

Jerold Cartin, a Tucson attorney, wanted to know how much he can anticipate saving on his electric bill under competition. "Can we expect 25 percent, or more?" he asked.

"We're not guaranteeing any 25 percent savings," Irvin said.

Jennings said that it's impossible to predict what will result when the market is opened.

Jack Rose, the ACC's executive secretary, said savings will vary from case to case. He said large industrial customers can expect big savings. Others, like residential, rural and small business consumers, should anticipate smaller gains.

He said that consumers with no access to competition during the first two years can expect mandated savings of 3 percent to 4 percent.

Yvette A. Ramirez, representing Southern Arizona Human Resources, voiced concerns for low-income and rural customers who she said may lose out through competition.

"Consumer education is a must," she said. "We feel lost, we feel angry when we don't understand."

Rose said the commission is concerned about educating the public about the highly technical topic. Support for low-income programs is a priority of the commission, he said.

Irvin and Jennings said they were pleased with the capacity-plus turnout at last night's meeting at the state office complex at 400 W. Congress, which was more than double the size of the crowd attending a similar gathering in Phoenix Wednesday night.

"I think this is fabulous," said Irvin, who noted that fewer than 1 percent of eligible California residents took advantage of electric competition since it began there April 1.

"The enthusiasm is fabulous, and the comments have been great," Irvin said.

"It was a good crowd with good comments," Jennings said. "There seems to be more exuberance in Tucson than there is up north."

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## **Comments on Proposed Revisions of Retail Electric Competition Rules**

As we consider details in fine tuning the new rules, it is important to keep the goal of fostering sustainable orderly development of the new marketplace ever before us as a touchstone of reality. This is especially true of the solar portion of it. For the free market concept to succeed, consumers must be empowered to be effective in making informed market decisions. Without knowledgeable customers capable of acting effectively in their own interests, Adam Smith's "moving hand" would be fettered and the common good subverted. Competition, empowerment, freedom and choice are crucial elements of the transition to a better electric power marketplace.

### **I. R14-2-1609. SOLAR PORTFOLIO STANDARD (SPS)**

#### **Rate of Progress and Duration of SPS**

##### **Concerns**

In light of past experience, the proposed ten year period is inadequate. It is likely that it will take longer for this program to start to take effect. There is also a concern that a ten-year period will be viewed as something to finesse rather than live up to. Many are concerned that the purpose of the present Rules can be easily avoided by simply paying the penalty or buying solar generation elsewhere rather than installing it. Paying a small penalty year after year, buying time while trying to change the rules, may be much more enticing than following the rules and committing to long-term investments.

The present requirement of .5% starting in 1999 and 1% starting in 2002 has been criticized by some interests as too much too soon. They have proposed a more gradual increase. This is not necessary. If some are not prepared to take serious steps to implement the SPS in a timely way, then there are certainly others who are. All that needs to be done is to make the penalty fund available to those who are most willing and able to do the job.

A more gradual increase in implementing the SPS over time also makes the option of paying penalties instead of committing to equipment purchases more attractive because it lowers the target amounts, and therefore the penalties. If this is chosen by the Commission, then the penalties should be raised substantially, and ramped up in a similar way.

Moreover, integrated resource plans (IRPs) for at least two utilities included commitments to install substantial quantities of solar electric generating capacity on an increasing basis before the SPS was developed. So it is reasonable to assess how much progress has been made in fulfilling responsibilities under these IRPs. The IRPs are separate and predecessor agreements. Are these going to be fulfilled in addition to the SPS? It seems like some utilities do not have a strong argument in calling for much slower progress.

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However, if the Commission decides to compromise on this issue, then the ten-year period of the SPS should be extended an additional number of years sufficient to assure that the same amount of solar generating capacity is installed as is called for presently. In other words, time at one end should be traded for time at the other.

**Proposed solutions**

- ***Extend the period of the Solar Portfolio Standard.*** For the SPS to work, a long term commitment is needed. The period of the SPS should be 20 years, with reviews by the ACC at years 10 and 15.
- ***Keep the current schedule.*** If some can't do it, let the job go to those who can. Open the penalty fund to individuals and businesses. This puts the driving forces of the market place where they should be: driving the market. It helps connect the new Retail Electric Competition with the real world. It fosters competition. It promotes results.
- ***If the schedule is more gradual, increase the penalties.*** If the argument is that gradual increases are needed to make it possible to fulfill the conditions of the SPS, then the Commission should be considerably less tolerant of failure to comply. Smaller goals result in much lower penalty totals and weaken motivation. The penalty should start at \$1.00 per kWh and ramp up as noted below.
- ***Also, extend the period of the SPS more.*** If the schedule is more gradual, then it will achieve much lesser amounts of installed capacity within the allotted period of ten years. To make up for this, the period should be extended by whatever number of years is necessary to achieve the same capacity required by the current proposed rules.
- ***Allow only new generation to qualify for credits and multipliers.*** Only new solar generation installed on or after January 1, 1997 to serve customers in approved Distributed Solar Electric Generator and Solar Incentive Programs should be counted toward the extra credit multiplier.

**Penalty Assessments****Concerns**

As proposed, the SPS makes it easy to avoid installing solar generating capacity by buying solar power elsewhere or paying the penalty. Mild penalties allow it to be even more preferable to pay these on a year to year basis, rather than signing long-term contracts for solar generating systems. Mild penalties may give rise to trying to change the rules rather than follow them. Penalties should motivate desired results. They should be unavoidable and not represent a preferable alternative.

As one of our respondents pointed out, "Some electric service providers are capable of creating programs and making investments that will build customer interest in generating solar power and taking advantage of the portfolio standards. But a lot of them just are not very interested or very good at marketing solar to consumers, and other groups might make better use of the funds. The power marketers who are interested in coming in to compete are extremely variable in their ability to market solar power. And what they do not know how to sell, they will try to run down."

**Proposed solutions**

- ***Increase the penalty.*** A penalty of at least \$.50 /kWh seems appropriate as a starting point.
- ***Ramp up the penalty on the shortfall each year.*** For each year that the investment in solar capacity falls short of the standard, double the penalty for the amount carried over from the previous year. For example, if the shortfall is 1,000 kWh at the end of the first year, the penalty would be the standard at, say \$ .50 /kWh, for the sum of \$500. If the shortfall the following year is 2,000 kWh, the penalty would be the sum of 1,000 kWh from the previous year at twice the amount (\$ 1.00 /kWh), for \$1000, plus 1,000 kWh at the base rate (\$ .50 /kWh) for the current year for \$500, for a total of \$1500. If the shortfall is 3,000 kWh in the third year, it would be (1,000 kWh x \$2 /kWh) + (1,000 kWh x \$1 /kWh) + (1,000 kWh x \$ .50 /kWh).
- ***Specify Arizona sources for purchasing solar electricity.*** If the object is to stimulate an Arizona solar industry, the purchasing option should specify that any power purchased to fulfill the SPS must come from solar electric systems in Arizona.
- ***Penalty payments should come from corporate profits, not ratepayers.*** If ratepayers fund the penalties, then there is no motivation at all.

### Penalty Fund Accessibility and Use

#### **Concerns**

The proposed rules aim for a competitive market, but focus on utilities and government, historically the ones least likely to use solar or function competitively. To bring this competitive market concept into the real world, it is important to involve competitive real-world players in it. The focus should be on involving real consumers in a realistic market situation.

The track record of government-sponsored solar installations during the last attempt at solar market stimulation during the period 1978-82 does not inspire confidence in this as a useful basket in which to place all of the eggs. One of our respondents alluded to "orphans and gold-plated showcases." A recent study of such systems funded in Arizona found that almost all of them are now nonfunctional. Why? A large portion of these were never maintained properly and were simply abandoned when they first stopped working. This does not seem a promising way to promote sustainable orderly development of an industry. That is not to say that government purchasers should not be involved, only that they should not be the only ones involved.

The ratepayers are the ones paying for this. It seems only fair to open the penalty fund to all small ratepayers on an equal opportunity basis. (Large ratepayers are already getting what they want out of restructuring and can easily purchase whatever they want without help.) An unbiased, competent panel to help select the best uses for the funds can easily be recruited.

Another big concern is that the proposed rules appear to create a grant-style giveaway. When this was done in the solar water heater days, it resulted in the very expensive "gold-plated," unwanted and uncared-for orphan systems abandoned on roofs alluded to above. We strongly recommend against grants and giveaways. Experience shows that these seriously undermine sustained orderly economic development of a market. This is not the real world: it is Fantasyland.

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**Proposed solutions**

- **Expand concept of "public entity."** This should also include non-profit public service organizations and municipal, county and state organizations created to aggregate customers.
- **Open penalty fund to all small ratepayers.** The penalty fund should be opened to individuals, businesses and non-profit organizations too. These are more likely to put solar to good use, take good care of systems and value them. This is recognizably fair and reasonable. These are, after all, the ones who are contributing most of the money for funding the SPS.
- **Use penalty funds for buy-down, not giveaways.** Rather than funding government giveaways, the penalty fund should be used for buy-down of system costs, preferably a lesser amount like 25%. High tax credits killed the solar water heating industry 15 years ago. The real marketplace needs to sell real goods, not government giveaways. Buy-downs place this program back into the real world. Because fund recipients are committing more of their own money, this better assures that they value what they purchase and have a good use for it.
- **Limit penalty fund to buy-downs.** The money should be allocated only to buy-down of equipment purchases, not to purchasing electricity, planning, administration or other uses.

**Customer Role****Concerns**

Customers, consumers, ratepayers, purchasers of electric power constitute 50% of a functional competitive market, but their role is quite vague in the proposed rules. In particular, the SPS needs to clarify how customer-owned solar energy systems fit into these rules. In a real market, these are the ones who drive the market. Their role should be carefully considered, defined and protected.

Customers who buy their own solar energy equipment pay for the systems, assume much of the risk, and take on a long-term commitment to the system over its lifetime. Therefore customers should be informed of their rights, as well as the potential value of their solar generation. This should be used to encourage competition among electric service providers for the right to sell such customers electricity and count their solar generation toward portfolio standard requirements.

Solar equipment owned by the customer can provide an advantage in seeking competitive offers from electric service providers because the customer has solar generation that has value in meeting the solar portfolio standard. Allowing such owners to negotiate for lower utility rates with energy service providers, or use it to contribute to other public objectives like education, benefits all the taxpayers of Arizona and should encourage competition among electric service providers to win customers who have solar generation.

**Proposed solutions**

- **Define the rights of solar energy equipment owners.** Such customers should have the right to automatically become a free agent in the competitive marketplace upon installation of the solar system. Rights to SPS credits and multipliers should reside with the such owners and transferable or assignable by the owner to others. They should be free to select an electric



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service provider of their choice and assign as they may choose any benefits that they may bring to that provider in helping to comply with the SPS. These rights should be developed and periodically improved through a public process.

- ***Inform such solar owners of their roles and rights.*** The ACC can develop a standard statement for distribution. This could be accomplished with the help of solar businesses, utilities, government agencies and public service organizations.

Industry RoleConcerns

Leading up to this, much of the problem with the electrical industry has been its own narrow definition of its role and its isolation from its customers. In Arizona, where most people want solar energy, utilities built coal and nuclear plants instead. In Sacramento, where ratepayers directly elect the Board of Directors of the utility, they are implementing the largest utility solar program in the world. In a real, competitive marketplace, suppliers serve customers needs and wants. In this case, the utilities had to be told to do it.

Electric companies should be encouraged to take a broader view of their role and serve customer needs rather than simply delivering a product. They can provide a whole range of energy products and services. For example, if people need hot water, wouldn't it be better to satisfy that in the best, most cost-effective way and use the increasingly expensive electrons more efficiently? This is a natural role for utilities and a means by which they can remain vital, important parts of our economy. It is also the best way to use existing resources, spread costs in introducing new technology, effect economic efficiency and reduce costs to our society.

Although inclusion of solar water heating (SWH) has long been discussed, it has been omitted from the Solar Portfolio Standard. Because SWH displaces electrical loads, it contributes to a balanced electrical program. In addition, SWH is especially important for many rural and remote ratepayers, who typically use electricity or propane to heat water, both very expensive.

A broader view of solar energy as well as utilities is needed. One of the special aspects of solar energy is that it can be obtained and used in so many different ways. A photovoltaic system or a solar water heater are not redundant appliances. They are important elements of a comprehensive set of approaches which, together, offer much better, more cost effective, long term alternatives. SWH is

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**Concerns**

There are a number of technical and rate issues relating to grid-tied small systems, like homeowner-owned photovoltaic systems. Two that are crucial to making this possible are simple, equitable, inexpensive, uniform, statewide interconnection and net metering standards. It seems appropriate to include these essential components in the rules.

**Proposed solutions**

- ***Develop uniform, statewide interconnection standards.*** This can be accomplished by convening a panel of knowledgeable, interested parties to help. They should be simple, easy to accomplish and cost no more than standard electrical connection fee.
- ***Develop uniform, statewide net metering standards.*** This could be accomplished similarly. These should also be simple, equitable, easy to accomplish and inexpensive.

**II. OTHER RESTRUCTURING ISSUES****Consumer Protection****Concerns**

It is clear in reading this document that producers and large consumers were well represented in the process. These can take good care of themselves. Now it is time to focus attention on the 99.5% of the market involving small ratepayers. As stated at the hearings, these are largely unprepared for the new market rules. Two years provides little time for helping them. A number of measures are needed to inform and empower consumers so that they can function effectively in the new marketplace and be protected during the transition. A functional competitive market requires a balance of power between sellers and buyers.

**Proposed solutions**

- ***Continue a public process to develop this aspect of the transition.*** As expressed during the hearing, many are concerned about this plan. Much work is still needed in refining it. What better way than involving the public, public organizations and governments in developing the details of helping small ratepayers adjust to the new market?
- ***Provide information and education.*** Perhaps the simplest and most cost-effective way would be to include a series of inclosures with utility bill mailings. These could be developed by the ACC in cooperation with utilities, governments, consumer and other non-profit organizations. A single sheet of paper, printed on both sides, would add minimally to mailing costs. Each month, an information sheet dealing with a new topic could be inclosed.
- ***Develop a consumer bill of rights.*** As suggested by the Arizona Community Action Association, this would do much to empower and protect small ratepayers.
- ***Expand efforts to include as many people and groups as possible.*** For example, as stated during the hearing, a number of Native American tribes and service providers for low income people feel outside of the process so far. Expanded involvement does not have to be involved

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or expensive. Simply set up mechanisms of involvement, enlist the help of news media, government and utilities in informing people of these and carry them out.

### Freedom of Aggregation

#### **Concerns**

Small ratepayers need all the help they can get. Aggregation offers big benefits to many of them. While we recognize that this is a complex issue and it is premature for allowing commercial aggregators into the market, why not use some of the limited time available during the transition to explore a few other options, so that when aggregation becomes possible people may have more choices? The ACC should provide itself with the authority to allow a small number of pilot projects by organizations that are noncommercial and not-for-profit in nature.

The selection criteria for the first phase excludes residential customers and small businesses. Municipalities or non-profit public service organizations may be interested in encouraging or acting as aggregators for low-income neighborhoods or districts where they are trying to encourage small businesses. The rules for selection in the first competitive phase should recognize and encourage such aggregators, particularly for smaller customers that are the least likely to take advantage of competition.

#### **Proposed solutions**

- *Provide for ACC authorization of pilot aggregation projects.* The ACC could consider such pilot projects on a case by case basis and authorize those that seem most promising. To avoid problems, this would be limited to non-profit and government groups.
- *Provide for aggregation by noncommercial entities.* Aggregation through municipalities, cooperatives and non-profit organizations all offer consumers important value and benefits. These should also be encouraged as participants in the new competitive marketplace.
- *Allow consumers to aggregate their SPS benefits.* Consumers should be specifically allowed to assign or transfer their SPS benefits as they may choose.

### Disclosure

#### **Concerns**

Disclosure is the single most important means to help empower consumers in the marketplace. Without that, the cost information will be too great for consumers. A recent experience illustrates this point. A call to the local utility with a simple request for the average residential electric bill was passed to five different people, all of whom said that the information was not available. Just two weeks later, completely by accident, a mailing of other information from the utility included a small brochure with that information.

Disclosure should be simple, flexible and address consumer needs. The ACC should give itself the flexibility to add to the information required in response to consumer demand. The ACC plan is good

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as far as it goes, but many consumers are going to want more information on environmental impacts and other matters than specified in the current rules.

**Proposed solutions**

- ***Require broader range of disclosure.*** Add water consumption per kWh. Add environmental impacts besides air pollution, like waste generation.
- ***Allow ACC flexibility to develop better disclosure requirements.*** The ACC should involve the public, non-profit organizations and government in assessing public information needs and developing this aspect further.